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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/736,380

Applicant(s)

JOSHI ET AL.

Examiner

Michael J. Brown

Art Unit

2116

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38, 40 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-38, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 38, 40, and 41 is withdrawn in view of the newly discovered reference(s) to Alloing et al.[Alloing](US PGPub 2003/0110472).

Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1, 7, 14, 22- 24, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Chiles et al.[Chiles](US Patent 6,581,157).

As to claim 1, Autry discloses a method of updating a non-essential region(configuration data region; see column 2, line 26) stored in a non-volatile memory device(FLASH memory 97; see Fig. 1) in a computer system(system 10, see Fig. 1), the

method comprising building an image file(basic input/output system(BIOS) image; see column 2, lines 12-13), the image file comprising an essential region(preserved data from the configuration data region; see column 2, lines 40-41) for storing program code required for booting the computer system and the non-essential region for storing optional program code for the computer system. Autry also discloses the method comprising copying the image file to the non-volatile memory device in the computer system(see column 2, lines 11-12), and following copying the image file to the non-volatile memory device in the computer system(see column 2, lines 16-19). However, Autry fails to specifically disclose updating only the non-essential region stored in the non-volatile memory device to update program code for the computer system and not updating the essential region stored in the non-volatile memory device.

Chiles teaches updating only the non-essential region stored in a non-volatile memory device(non-volatile memory; see column 1, line 22) to update program code(digital information; see column 1, line 21) for a computer system(see column 1, lines 21-24) and not updating the essential region stored in the non-volatile memory device(typically non-volatile memory is not updateable). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Chiles' invention with Autry's in order to update only a portion of the non-volatile memory. The motivation to do so would have been to be able to conform to the specific device version used by the device driver(see Chiles column 1, lines 22-24).

As to claim 7, Autry discloses the method wherein the program code in the essential region comprises a power-on self test (POST) routine(see column 2, lines 44-56).

As to claim 14, Autry discloses a computer system(system 10, see Fig. 1) for updating non-essential data(configuration data region; see column 2, line 26) in a non-volatile memory device(FLASH memory 97; see Fig. 1), comprising the non-volatile memory device for storing an image file(basic input/output system(BIOS) image; see column 2, lines 12-13), the image file comprising an essential region(preserved data from the configuration data region; see column 2, lines 40-41) for storing program code required for booting the computer system and the non-essential region for storing optional program code for the computer system. Autry also discloses the computer system comprising a memory(system memory 88, see Fig. 1) for storing a program containing code for updating the image file stored in the non-volatile memory device, and a processor(processor 82, see Fig. 1), functionally coupled to the memory and associated with the non-volatile memory device, wherein the processor is responsive to computer-executable instructions contained in the program and operative to copy the image file to the non-volatile memory device(see column 2, lines 16-19). However, Autry fails to specifically disclose the program operative to update only the non-essential region in the non-volatile memory device to update the non-essential data and not update the essential region in the non-volatile memory device.

Chiles teaches updating only the non-essential region stored in a non-volatile memory device(non-volatile memory; see column 1, line 22) to update the non-essential

data(digital information; see column 1, line 21) and not updating the essential region stored in the non-volatile memory device(typically non-volatile memory is not updateable). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Chiles' invention with Autry's in order to update only a portion of the non-volatile memory. The motivation to do so would have been to be able to conform to the specific device version used by the device driver(see Chiles column 1, lines 22-24).

As to claim 22, Autry discloses the computer system wherein the essential region in the image file comprises critical program code(see column 2, lines 12-16).

As to claim 23, Autry discloses the computer system wherein the critical program code comprises a power-on self test (POST) routine(see column 2, lines 44-56).

As to claim 24, Autry discloses a computer-readable storage medium(system 10, see Fig. 1) having computer-executable instructions stored thereon that, when executed by a computer, cause the computer to build an image file(basic input/output system(BIOS) image; see column 2, lines 12-13) for updating a BIOS installed within a computer system, wherein the BIOS includes, the image file comprising an essential region(preserved data from the configuration data region; see column 2, lines 40-41) for storing program code required for booting the computer system and a non-essential region(configuration data region; see column 2, line 26) for storing optional program code not required for booting the computer system, wherein the image file includes an updated non-essential region. Autry also discloses the computer-readable storage medium having instructions that cause the computer to copy the essential region and

the updated non-essential region to a non-volatile memory device(FLASH memory 97; see Fig. 1) provided by the computer system, and after copying the essential region and the updated non-essential region to the non-volatile memory device(see column 2, lines 16-19). However, Autry fails to specifically disclose updating only the non-essential region in the BIOS with the updated non-essential region in the non-volatile memory device while maintaining the essential region unchanged in the non-volatile memory device.

Chiles teaches updating only the non-essential region stored in a non-volatile memory device(non-volatile memory; see column 1, line 22) to update the non-essential data(digital information; see column 1, line 21) and not updating the essential region stored in the non-volatile memory device(typically non-volatile memory is not updateable). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Chiles' invention with Autry's in order to update only a portion of the non-volatile memory. The motivation to do so would have been to be able to conform to the specific device version used by the device driver(see Chiles column 1, lines 22-24).

As to claim 30, Autry discloses the computer-readable medium wherein the program code in the essential region comprises a power-on self test (POST) routine(see column 2, lines 44-56).

3. Claims 2-6, 15, 16, 24, 25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Chiles et al.[Chiles](US

Patent 6,581,157), and further in view of Forsman et al.[Forsman](US Patent 6,665,813).

As to claim 2, Autry and Chiles teach the limitations as cited in claim 1; however, Autry and Chiles fail to teach the method wherein the non-essential region in the image file comprises one or more non-essential blocks.

Forsman teaches a method where a non-essential region(Copy A 304 and Copy B 306; see Fig. 3) comprises one or more non-essential block(Copy A 304 or Copy B 306, see Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Forsman's multiple non-essential blocks with Autry's non-essential region in order to have "back-up" blocks within the non-essential region. The motivation to do so would be to have another block to depend on in case one is corrupted(see Forsman column 5, lines 46-56).

As to claim 3, Forsman teaches the method further comprising reserving at least one of a plurality of sectors(see Fig. 3) in the non-volatile memory device for storing exclusively the at least one non-essential blocks(see column 4, line 66-column 5, line 2; see also Fig. 3).

As to claim 4, Forsman teaches the method wherein updating the non-essential region in the non-volatile memory device comprises mapping the one or more non-essential blocks to the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14).

As to claim 5, Forsman teaches the method wherein updating the non-essential region in the non-volatile memory device comprises mapping the one or more non-

essential blocks to a portion of the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14; see also Fig. 3).

As to claim 6, Forsman teaches the method wherein the portion of the at least one reserved sector in the non-volatile memory device is a paragraph multiple(see Fig. 3).

As to claim 15, Autry and Chiles teach the limitations as cited in claim 14; however, Autry and Chiles fail to teach the computer system wherein the non-essential region in the image file comprises at least one or more non-essential blocks.

Forsman teaches a computer system(data processing system 100, see Fig. 1) where a non-essential region(Copy A 304 and Copy B 306; see Fig. 3) comprises one or more non-essential block(Copy A 304 or Copy B 306, see Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Forsman's multiple non-essential blocks with Autry's non-essential region in order to have "back-up" blocks within the non-essential region. The motivation to do so would be to have another block to depend on in case one is corrupted(see Forsman column 5, lines 46-56).

As to claim 16, Forsman teaches the computer system wherein the non-volatile memory device comprises a plurality of sectors(see Fig. 3) for storing the at least one non-essential block(see column 4, line 66-column 5, line 2; see also Fig. 3).

As to claim 25, Autry and Chiles teach the limitations as cited in claim 24; however, Autry and Chiles fail to teach the computer-readable storage medium wherein

the non-essential region in the image file comprises at least one or more non-essential blocks.

Forsman teaches a computer-readable storage medium(data processing system 100, see Fig. 1) where a non-essential region(Copy A 304 and Copy B 306; see Fig. 3) comprises one or more non-essential block(Copy A 304 or Copy B 306, see Fig. 3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Forsman's multiple non-essential blocks with Autry's non-essential region in order to have "back-up" blocks within the non-essential region. The motivation to do so would be to have another block to depend on in case one is corrupted(see Forsman column 5, lines 46-56).

As to claim 27, Forsman teaches the computer-readable storage medium wherein updating only the non-essential region in the non-volatile memory device comprises mapping the at least one non- essential block to the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14).

As to claim 28, Forsman teaches the computer-readable storage medium wherein updating only the non-essential region in the non-volatile memory device comprises mapping each non-essential block to a portion of the at least one reserved sector in the non-volatile memory device(see column 4, line 66-column 5, line 14; see also Fig. 3).

As to claim 29, Forsman teaches the computer-readable storage medium wherein the portion of the at least one reserved sector in the non-volatile memory device is a paragraph multiple(see Fig. 3).

4. Claims 8-13, 17-21, 26, and 31-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Chiles et al.[Chiles](US Patent 6,581,157)in view of Forsman et al.[Forsman](US Patent 6,665,813), and further in view of Singer et al.[Singer](US Patent 7,017,040).

As to claim 8, Autry, Chiles, and Forsman teach and disclose the limitations of claim 2 and comprising at least one module(see Forsman, Fig. 3); however, Autry, Chiles, and Forsman fail to teach or disclose the method wherein the one or more non-essential blocks comprise a header.

Singer teaches the one or more non-essential blocks comprise a header(volume header 58, see Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Singer's non-essential block with a header to Autry and Forsman's non-essential block in order to contain a header. The motivation to do so would be to have been to have the ability to have the header point to the module which contains a list of the locations of everything contained within the BIOS update file(see Singer column 2, lines 40-42).

As to claim 9, Singer teaches the method wherein the header is located at the beginning of the one of the one or more non-essential blocks(see Fig. 2).

As to claim 10, Singer teaches the method wherein the header comprises a pointer to a first module in the one of the one or more non-essential blocks(see column 2, lines 40-42 and Fig. 2).

As to claim 11, Singer teaches the method wherein the at least one module comprises a module header(volume header 58, see Fig. 2) and module data(data 61, see Fig. 2).

As to claim 12, Singer teaches the method wherein the module header comprises a pointer to a next module in the at least one non-essential block(see column 2, lines 40-42 and Fig. 2).

As to claim 13, Singer teaches the method wherein the module data comprises at least one of graphics data, a language module, and diagnostic tools(see column 2, lines 45-47).

As to claim 17, Autry, Chiles, and Forsman teach and disclose the limitations of claim 15 and comprising at least one module(see Forsman, Fig. 3); however, Autry, Chiles, and Forsman fail to teach or disclose the computer system wherein the at least one non-essential block comprising a header.

Singer teaches the at least one non-essential block comprising a header(volume header 58, see Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Singer's non-essential block with a header to Autry and Forsman's non-essential block in order to contain a header. The motivation to do so would be to have been to have the ability to have the header point to the module which contains a list of the locations of everything contained within the BIOS update file(see Singer column 2, lines 40-42).

As to claim 18, Singer teaches the computer system wherein the header is located at the beginning of the non-essential block(see Fig. 2).

As to claim 19, Singer teaches the computer system wherein the at least one module comprises a module header(volume header 58, see Fig. 2) and module data(data 61, see Fig. 2).

As to claim 20, Singer teaches the computer system wherein the module data comprises program code(see column 2, lines 40-42 and Fig. 2).

As to claim 21, Singer teaches the computer system wherein the module data comprises at least one of graphics data, a language module, and diagnostic tools(see column 2, lines 45-47).

As to claim 26, Singer discloses the computer-readable storage medium further comprising reserving at least one of a plurality of sectors(see Fig. 3) in the non-volatile memory device for storing the at least non-essential block(see column 4, line 66-column 5, line 2; see also Fig. 3).

As to claim 31, Autry, Chiles, and Forsman teach and disclose the limitations of claim 25 and comprising at least one module(see Forsman, Fig. 3); however, Autry, Chiles, and Forsman fail to teach or disclose the computer-readable medium wherein the at least one non-essential block comprises a header.

Singer teaches the at least one non-essential blocks comprises a header(volume header 58, see Fig. 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Singer's non-essential block with a header to Autry and Forsman's non-essential block in order to contain a header. The motivation to do so would be to have been to have the ability to have the header point to the

module which contains a list of the locations of everything contained within the BIOS update file(see Singer column 2, lines 40-42).

As to claim 32, Singer teaches the computer-readable storage medium wherein the header is located at the beginning of the at least one non-essential block(see Fig. 2).

As to claim 33, Singer teaches the computer-readable storage medium wherein the header comprises a pointer to a first module in the at least one non-essential block(see column 2, lines 40-42 and Fig. 2).

As to claim 34, Singer teaches the computer-readable storage medium wherein the at least one module comprises a module header(volume header 58, see Fig. 2) and module data(data 61, see Fig. 2).

As to claim 35, Singer teaches the computer-readable storage medium wherein the module header comprises a pointer to a next module in the at least one non-essential block(see column 2, lines 40-42 and Fig. 2).

As to claim 36, Singer teaches the computer-readable storage medium wherein the module data comprises program code(see Fig. 2).

As to claim 37, Singer teaches the computer-readable storage medium wherein the module data comprises at least one of graphics data, a language module, and diagnostic tools(see column 2, lines 45-47).

5. Claims 38 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Alloing et al.[Alloing](US PGPub 2003/0110472).

As to claim 38, Autry discloses a method of utilizing a non-essential region(configuration data region; see column 2, line 26) in a non-volatile memory device(FLASH memory 97; see Fig. 1) for executing updated program code(basic input/output system(BIOS) image; see column 2, lines 12-13), the method comprising searching the non-essential region in the non-volatile memory device for at least one module(data that indicates various boot options; see column 2, lines 27-28), wherein the non-volatile memory device comprises a plurality of modules containing program code(boot options; see column 2, line 28) for a computer system(system 10, see Fig. 1); if the at least one module is found in the non-essential region, then executing the program code in the at least one module, wherein the at least one module in the non-essential region contains an updated version of the program code(replacement BIOS image; see column 2, line 31) for the computer system(see column 2, lines 24-35); and an essential region(preserved data from the configuration data region; see column 2, lines 40-41) in the non-volatile memory device for the at least one module, wherein the at least one module in the essential region contains a current version of the program code(preserved data from the configuration data region; see column 2, lines 40-41) for the computer system. However, Autry fails to specifically disclose the method wherein if the at least one module is not found in the non-essential region, then searching an essential region in the non-volatile memory device for the at least one module, wherein

the at least one module in the essential region contains a current version of the program code for the computer system; and if the at least one module is found in the essential region, then executing the program code in the at least one module.

Alloing teaches a method wherein if at least one updated version module(new node; see paragraph 0157, line 2) is not found, then searching for an at least one current version module(current node; see paragraph 0157, line 1); and if the at least one module is found in the essential region, then executing the program code in the at least one module(see paragraph 0162). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions of Autry and Alloing in order to resort to Autry's preserved data only when the replacement BIOS image does not exist. The motivation to do so would have been create a method wherein a system always looks to update code and only when there is no new code available does the method use pre-existing code.

As to claim 41, Autry discloses the method of claim 38, wherein the updated version of the program code contained in the non-essential region comprises updated program code for a BIOS in the computer system(see column 2, lines 12-19).

6. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Autry(US Patent 6,990,577) in view of Alloing et al.[Alloing](US PGPub 2003/0110472), and further in view of Singer et al.[Singer](US Patent 7,017,040).

As to claim 40, Autry and Alloing teach the method as cited in claim 38; however, Autry and Alloing fail to specifically teach the method wherein the at least one module

further comprises a module header, the module header comprising an identification of the program code contained in the at least one module.

Singer teaches a method wherein at least one module(BIOS update file 50, see Fig. 2) further comprises a module header(volume header 58, see Fig. 2), the module header comprising an identification(list of locations; see column 2, lines 40-41) of the program code contained in the at least one module(see column 2, lines 40-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the inventions of Autry and Alloing with the invention of Singer in order to include a header to Autry's data that indicates various boot options. The motivation to do so would have been to assist in location the various boot options.

Response to Arguments

7. Applicant's arguments, see Remarks, filed 5/22/2008, with respect to the rejection(s) of claim(s) 1, 7, 14, 22- 24, and 30 under 35 U.S.C. 102(e) as being anticipated by Autry(US Patent 6,990,577)have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Autry(US Patent 6,990,577) in view of Chiles et al.[Chiles](US Patent 6,581,157).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Brown whose telephone number is (571)272-5932. The examiner can normally be reached Monday-Thursday from 7:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571)272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael J. Brown
Art Unit 2116

/Thuan N. Du/
Primary Examiner, Art Unit 2116

